submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

1. **Type of Well**
GAS

5. **Lease Number**
NMSF-079037

6. **If Indian, All. or Tribe Name**

7. **Unit Agreement Name**

2. **Name of Operator**
BURLINGTON RESOURCES OIL & GAS COMPANY

8. **Well Name & Number**
Hale #2A

3. **Address & Phone No. of Operator**
PO Box 4289, Farmington, NM 87499 (505) 326-9700

9. **API Well No.**
30-045-21914

4. **Location of Well, Footage, Sec., T, R, M**
1625'FNL, 1020'FWL, Sec.27, T-31-N, R-8-W, NMPM

10. **Field and Pool**
Blanco Mesaverde

11. **County and State**
San Juan Co, NM

12. **CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA**

Type of Submission	Type of Action	
_X_ Notice of Intent	___ Abandonment	___ Change of Plans
	___ Recompletion	___ New Construction
___ Subsequent Report	___ Plugging Back	___ Non-Routine Fracturing
	___ Casing Repair	___ Water Shut off
___ Final Abandonment	___ Altering Casing	___ Conversion to Injection
	___ Other -	

13. **Describe Proposed or Completed Operations**
It is intended to squeeze and add pay to the subject well according to the attached procedure and wellbore diagram.

AUG 2001
RECEIVED
OIL CON. DIV.
DIST. 3

14. **I hereby certify that the foregoing is true and correct.**

Signed Peggy Cole Title Regulatory Supervisor Date 7/9/01

TLW

(This space for Federal or State Office use)
APPROVED BY /s/ Jim Lovato Title _____ Date JUL 30
CONDITION OF APPROVAL, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NMOCD

HALE #2A

Single-Stage Lewis Payadd Procedure
1625' FNL, 1020' FWL
Unit E, Section 27, T031N, R008W
San Juan County, New Mexico
Latitude: 36 DEG, 52.28' Longitude: 107 DEG, 40.05'

Summary:
Lewis pay is going to be added to the existing Menefee and Point Lookout production. The Lewis will be hydraulically fracture stimulated in one stage with 200,000# 20/40 sand and a 75 quality, N_2 foamed, 20# linear gel. Foam is used to limit the fluid damage to the Lewis by reducing liquid volumes and by aiding in the liquid recovery during the flowback. **NOTE: TWO SQUEEZE JOBS WILL BE NECESSARY TO ISOLATE THE LEWIS BEFORE THE FRACTURE TREATMENT.**

- **COMPLY WITH ALL NMOCD, BLM, AND BR REGULATIONS.**
- **CONDUCT DAILY SAFETY MEETINGS FOR ALL PERSONNEL ON LOCATION.**
- **PLACE FIRE SAFETY EQUIPMENT IN STRATEGIC LOCATIONS.**
- **INSPECT LOCATION AND WELLHEAD, AND INSTALL RIG ANCHORS PRIOR TO RIG MOVE.**
- **DIG FLOWBACK PIT OR SET FLOWBACK TANK.**
- **SET AND FILL 4 400-BBL FRAC TANKS WITH 2% KCl WATER. TEST AND FILTER IF NECESSARY.**

Equipment Needed:
4 – 400-bbl frac tanks with 2% KCl water
1 – 4-1/2" CIBP
1 – 4-1/2" packer
2 – 4-1/2" cement retainers

PROCEDURE:

1. MIRU. Record and report SI pressures on tubing, casing, and bradenhead. Lay blowdown line and blow well down. Kill well with 2% KCl water. ND horsehead. TOOH with one 3/4"x2' pony rod, one 3/4"x6' pony rod, 84 guided 3/4" rods, 141 plain 3/4" rods, and 2"x1.25"x10'x14' RHAC-Z pump. LD pump, but stand rods back in derrick. Have pump serviced or replaced as needed. ND WH and NU BOP. Test and record operation of rams. NU blooie line and 2-7/8" relief line. Redress production wellhead as needed.

2. 183 jts 2-3/8", 4.7#, J-55 tubing set at **5696'**. PU additional joints of tubing and tag bottom, recording the depth. PBTD should be at +/- **5710'**. TOOH with 2-3/8" tubing and stand back. Visually inspect tubing and replace bad joints as necessary. Check tubing for scale, and notify Production Engineer and Drilling Manager if it is present.

3. PU and TIH with 4-1/2" CIBP on 2-3/8" tubing. Set CIBP at **5211'**. Load hole with 2% KCl water. Pressure test the casing and CIBP to **3000** psig (80% of 7" casing burst). TOOH with tubing and stand back in derrick.

4. RU wireline. Correlate to attached CDL and then perforate 2 squeeze holes at **4921'** using a 3-1/8" gun loaded with HSC-3125-305 charges (16 gram, 0.37" perf diameter, 13.38" penetration) at 180° phasing. RD wireline.

5. PU and TIH with 4-1/2" cement retainer on 2-3/8" tubing. Set cement retainer at **4871'**. PU without stinging out of retainer and pressure test tubing. Set weight back on retainer and establish an injection rate and pressure. Mix and pump **150** sx of class "B" cement with 2% $CaCl_2$. Sting out of the retainer and reverse circulate the tubing clean. **NOTE: DO NOT LEAVE CEMENT ON TOP OF RETAINER.** TOOH with tubing and stand back.

6. RU wireline. Correlate to attached CDL and then perforate 2 squeeze holes at **4085'** using a 3-1/8" gun loaded with HSC-3125-305 charges (16 gram, 0.37" perf diameter, 13.38" penetration) at 180° phasing. RD wireline.

7. PU and TIH with 4-1/2" cement retainer on 2-3/8" tubing. Set cement retainer at **4035'**. Establish an injection rate and pressure. Mix and pump **150** sx of class "B" cement with 2% $CaCl_2$. Sting out of the retainer and leave 1/4 bbl cement on top of the retainer. Reverse circulate the tubing clean. TOOH with tubing and stand back. Shut well in and WOC for 8-12 hours.

8. PU and TIH with 3-7/8" bit and DO cement and the cement retainer at **4035'**. DO cement to the retainer at **4871'**. **NOTE: DO NOT DRILL OUT THE CEMENT RETAINER. IT WILL ISOLATE THE BOTTOM SQUEEZE HOLES FROM THE LEWIS FRAC.** Spot **10** bbls 15% inhibited HCl with clay stabilizer from **4871'** to above the top planned Lewis perf. TOOH with tubing and LD bit.

9. RU wireline and run GR-CBL-CCL without pressure from **4871'** to **3451'** (top of 4-1/2" liner). Correlate to attached CDL. Contact Production Engineer and Drilling Manager to evaluate CBL and decide course of action,

HALE #2A

Single-Stage Lewis Payadd Procedure
1625' FNL, 1020' FWL
Unit E, Section 27, T031N, R008W
San Juan County, New Mexico
Latitude: 36 DEG, 52.28' Longitude: 107 DEG, 40.05'

including possible resqueezing and alternate breakdown method.

10. Correlate to GR-CBL-CCL and then perforate the Lewis interval with 3-1/8" Select-Fire guns loaded with HSC-3125-306T charges (12 gram, 0.3" perf diameter, 17.48" penetration). Shoot **60** holes 1 shot every 2' from the top down in acid at the following depths and then RD wireline:

4320-28', 4348-56', 4375-83', 4453-61', 4478-86', 4518-26', 4584-92', 4617-25', 4658-66', 4716-24', 4768-76', 4833-41'

11. PU and TIH with 4-1/2" packer on 2-3/8" tubing. Set packer at **4135'**.

12. RU pump truck. Hold safety meeting with all personnel on location. Pressure test surface lines to **6167** psig. Apply **500** psig to tubing string annulus and monitor this pressure throughout the breakdown. Pump **48** bbls of 15% inhibited HCl with clay stabilizer at 6 bpm and flush with 2% KCl water. Drop a total of **120** 7/8", 1.3 SG RCN ball sealers, dropping the first after pumping 2 bbls of acid, and evenly spacing throughout the remainder of the job. Max pressure at balloff (static) should not exceed **3000** psig. Refer to the following table for max pressures at various rates (70% of 2-3/8" tubing burst). Record ISIP. Bleed off pressure and RD pump truck.

Rate (bpm)	Max Pressure (psig)
0	3000
2	3159
4	3951
6	5167

13. Release packer and TIH to knock RCN ball sealers off perforations. Tag cement retainer at **4871'.** TOOH with 2-3/8" tubing and packer. Stand back tubing and LD packer.

14. Install WH isolation tool. RU stimulation company and pressure test surface lines to **4000** psig. RU RU ProTechnics and **tag sand with 3 radioactive tracers.** Fracture stimulate the Lewis at a constant downhole rate of **40** bpm with 75 quality N_2 foamed 20# linear gel and 200,000# 20/40 sand according to the attached frac schedule. Flush to 100' above the top perf with 75 quality N_2 foam. **NOTE: THE MAX TREATING PRESSURE IS 3000 PSIG.**

15. Record ISIP, 5, 10, and 15-minute shut-in pressures. Shut-in frac valve. RD ProTechnics. RD stimulation company and install flowback line above frac valve. Lay flowback line to dual-choke manifold and pit. Open well to pit in accordance with the flowback schedule listed in the table below. **NOTE: DO NOT SHUT WELL IN DURING FLOWBACK.** When schedule dictates a larger choke size, open ball valve upstream of adjustable choke and open adjustable choke on manifold to appropriate size from table and begin flowing through the adjustable choke. Close ball valve upstream of positive flow bean and change out flow bean to next larger size in table. Open ball valve upstream of positive flow bean and begin flowing. Close ball valve upstream of adjustable choke and close adjustable choke. **NOTE: FOLLOW THIS SCHEDULE TO UTILIZE A 24-HOUR FLOWBACK. IF WELL BEGINS TO SLUG OR MAKE LARGE AMOUNTS OF SAND TO SURFACE, DROP TO NEXT SMALLER CHOKE SIZE. IF WELL BEGINS TO TAPER OFF IN LIQUID PRODUCTION AND FLOW MOSTLY N_2, CHANGE TO NEXT LARGER CHOKE SIZE BEFORE TIME SCHEDULE DICTATES.**

10/64" Choke	Approximately 2 hrs.
12/64" Choke	Approximately 2 hrs.
14/64" Choke	Approximately 2 hrs.
16/64" Choke	Approximately 3 hrs.
18/64" Choke	Approximately 3 hrs.
20/64" Choke	Approximately 3 hrs.
22/64" Choke	Approximately 3 hrs.
24/64" Choke	Approximately 3 hrs.
32/64" Choke	Approximately 3 hrs.

16. ND WH isolation tool. PU and TIH with 3-7/8" mill on 2-3/8", 4.7#, J-55 tubing and CO to cement retainer at **4871'.**

HALE #2A

Single-Stage Lewis Payadd Procedure
1625' FNL, 1020' FWL
Unit E, Section 27, T031N, R008W
San Juan County, New Mexico
Latitude: 36 DEG, 52.28' Longitude: 107 DEG, 40.05'

When wellbore conditions permit, drill out the cement retainer with air/mist. **NOTE: WHEN MILLING, MIST RATE MUST NOT BE LESS THAN 12 BPH.**

17. CO to CIBP at **5211'** with air/mist. When the well is sufficiently clean, gauge the Lewis interval for 1 hour, recording results every 15 minutes. A quickly dropping pitot gauge (unstable) over the 60 minutes may indicate liquid loading, and that further time should be spent cleaning up the Lewis interval. Further cleanup should be discussed with the Production Engineer and Drilling Manager. Drill out the CIBP with air/mist.

18. CO to PBTD at **5710'.** PU above the top Lewis perf at **4320'** and flow the well naturally, making short trips for cleanup when necessary. Discuss sand production with Production Engineer and Drilling Manager to determine when cleanup is sufficient. TOOH and LD mill.

19. RU ProTechnics. Run Spectral GR tool across the Lewis from **4991'** to **4170'.** RD ProTechnics.

20. Rabbit all tubing prior to TIH. TIH with purge valve; one joint of 2-3/8", 4.7#, J-55 tubing; a 4'x2-3/8" perf'd pup joint; 1.78" ID seating nipple with a tubing plug; and then remaining 2-3/8" tubing according to the attached diagram. Replace any bad joints. Land tubing at **5696'.** ND BOP and NU WH. RU wireline and retrieve tubing plug from seating nipple. **NOTE: DURING CLEANOUT OPERATIONS THE RESERVOIR MAY BE CHARGED WITH AIR. AS A RESULT OF EXCESS OXYGEN LEVELS THAT MAY BE IN THE RESERVOIR AND/OR WELLBORE, CONTACT THE LEASE OPERATOR TO DISCUSS THE NEED FOR DETERMINING OXYGEN LEVELS PRIOR TO RETURNING THE WELL TO PRODUCTION.**

21. PU and TIH with a 18' x 1" OD dip tube, 2"x1.25"x10'x14' RHAC-Z insert pump, 141 plain 3/4" rods, 84 guided 3/4" rods, a 6'x3/4" pony rod, and a 3/4"x2' pony rods. Test pump action and hang rods on pumping unit. RD and MOL. Return well to production.

Recommend: J. Tom Loveland 7/5/01
Production Engineer

Approve: Bruce W. Boyer 7-5-01
Drilling Manager

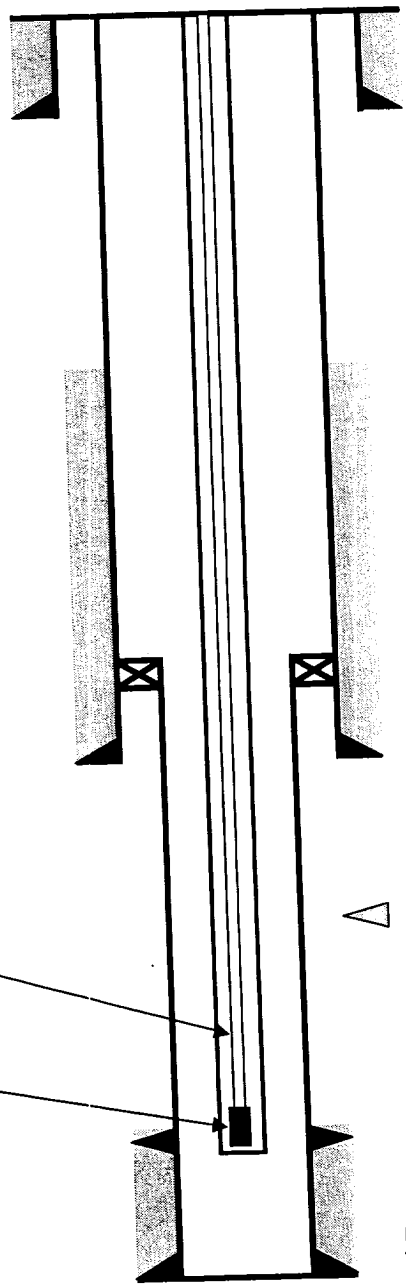
Approved: for RLC
Lewis Team Supervisor

Approve: Peggy Cole 7-5-01
Regulatory
Sundry Required

Production Engineer: Tom Loveland	**Office: 326-9771**	**Pager: 326-8698**	**Home: 564-8571**
Production Foreman: Hans Dube	**Office: 326-9555**	**Pager: 949-2664**	**Mobile: 320-4925**
Specialist: Wayne Ritter		**Pager: 324-7225**	**Mobile: 320-0436**
Lease Operator: Rick McDaniel		**Pager: 326-8777**	**Mobile: 320-2549**

HALE #2A

1625' FNL, 1020' FWL
Unit E, Section 27, T031N, R008W
Latitude: 36 DEG, 52.28'
Longitude: 107 DEG, 40.05'
San Juan County, New Mexico



9-5/8", 36#, K-55 casing set at 320'. Cmtd with 280 sx "B" w/ additives. TOC at surface by circ.

Liner hanger at 3451'.

7", 20#, K-55 casing set at 3639'. Cmtd with 95 sx "B" 65/35 Poz w/ additives + 70 sx "B" w/ additives. TOC at 1750 by temp svy.

From bottom: 141 plain 3/4" rods, 84 guided 3/4" rods, 3/4" x 6' pony rod, and a 3/4" x 2' pony rod.

2"x1.25"x10'x14' RHAC-Z pump.

183 jts 2-3/8", 4.7#, J-55. SN at 5661'. 4' perf'd sub, 1 jt 2-3/8", & bull plug below SN. End of tubing at 5696'.

4-1/2", 10.5#, H-40 liner set at 5752'. Cmtd with 225 sx "B" w/ additives. TOC at 5240 by CBL.

Formation Tops	
San Juan	
Nacimiento	
Ojo Alamo	2140
Kirtland	
Fruitland	2990
Pictured Cliffs	3343
Huerfanito Bentonite	
Navajo City Chacra	4165
Otero Chacra	4453
Otero Middle Bench	4584
Cliff House	4920
Menefee	
Point Lookout	5585
Mancos	
Gallup	
Greenhorn	
Granerros	
Dakota	

Proposed Lewis perfs: 4320-28', 4348-56', 4375-83', 4453-61', 4478-86', 4518-26', 4584-92', 4617-25', 4658-66', 4716-24', 4768-76', 4833-41' (60 holes).

MF / PL perforations: 5261-5701' (21 holes).

PBTD: 5710
TD: 5790